

The Catalogue contains the 3D model of all the objects that may be used to build the Model of a given Physical Area.

The Catalogue supports the following types of objects: Kits, Racks, Large boxes, Small boxes, Equipments, Conveyors, Parts, Workstations, Production Lines, Robots and Final Products.

To add a new Rack to the Catalogue by using a STEP model:

1. Go to “Catalogue / Racks”

Rack ID	Width	Depth	Height	# Levels	Actions
PSAAADL1	1391	2501	1598	3	[Icons]
embraer 1000x1000	1000	1000	1500	2	[Icons]
embraer 1000x1000 type 2	1000	1000	1500	2	[Icons]
embraer 1000x1000 type 3	1000	1000	1500	2	[Icons]
rack_step_ex_1	1100	700	1200	6	[Icons]
flowmat automated warehouse	2800	700	2000	4	[Icons]
flowmat operator workstation	900	610	1200	2	[Icons]
flowmat table	420	1300	1200	2	[Icons]
EMS 845x800	845	800	3000	2	[Icons]
slab 800x800x750	845	600	3000	2	[Icons]
MakProfile 1115x870 4x3 levels	1115	870	1570	5	[Icons]
MakProfile 371x870 4x1 levels	371.66	870	1570	5	[Icons]
Table 800x800x750	800	600	2000	2	[Icons]
Table 400x800x750 cell on left	400	600	2000	2	[Icons]
Table 400x800x750 cell on right	400	600	2000	2	[Icons]
rack	2800	700	2000	4	[Icons]
Table 800x800x750	600	800	2000	2	[Icons]
Hamover 550 X 360	550	360	500	3	[Icons]
PSA 2870x1225	1225	2870	1425	3	[Icons]
PSA 2870x1410	1410	2870	1425	3	[Icons]
EMD 760x900	757.5	900	3000	2	[Icons]

2. Press the top right button “New rack”

- (1) Set the field: “Identifier field” (DON’T use spaces)
- (2) Set the fields: “Functional Levels” and “Cells per level”
- (3) Set the fields: “External width”, “External depth” and “External height”
- (4) Set the fields: “Level width” and “Level thickness”
- (5) Press the “3D CAD model / Select file” button
- (6) Set the “Conversion to mm” field

The screenshot shows the 'Add rack type' form in the APM software. The form is divided into several sections:

- Step 1:**
 - Identifier: rack_step_ex_1 (1)
 - External width (mm): 1100 (3)
 - External depth (mm): 700 (3)
 - External height (mm): 1200 (3)
- Step 2:**
 - # Functional levels: 6 (2)
 - # Cells per level: 2 (2)
 - Level width (mm): 1000 (4)
 - Level thickness (mm): 10 (4)
- 3D CAD model:**
 - Format: step
 - Upload: [Select File] button (5)
 - attached file: rack_ex_1(original).step
- Conversion to mm (1000):** 1 (6)
- Buttons:** Save changes

On the right side, there is a diagram showing the dimensions of a rack: external width, external height, level width, level thickness, and vertical offset.

- Select “**Step 2**” in the form and adjust the vertical offset of each level (In **Step 1** were defined 6 levels). Then press the “**Save changes**” button and wait. When the upload completes you will be redirected to the list of Racks in the catalogue.

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Administration / APM / Catalogue / Racks / Add rack type

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Step 1 Step 2

Level	vertical offset (mm)	horizontal offset (mm)
Level 6	920	0
Level 5	750	0
Level 4	590	0
Level 3	420	0
Level 2	260	0
Level 1	100	0

3D CAD model:

Format: step Upload: Select File attached file: rack_ex_1(original).step

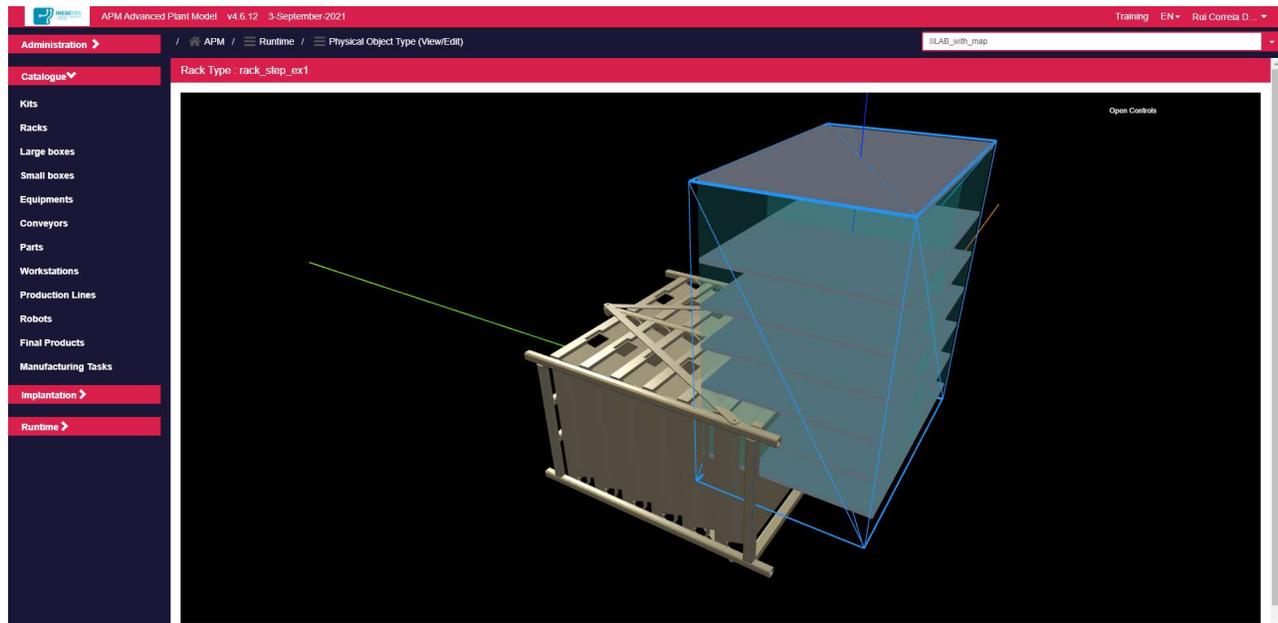
Conversion to mm (1000): 1

Save changes

Front view Side view

external width external height thickness level width vertical offset

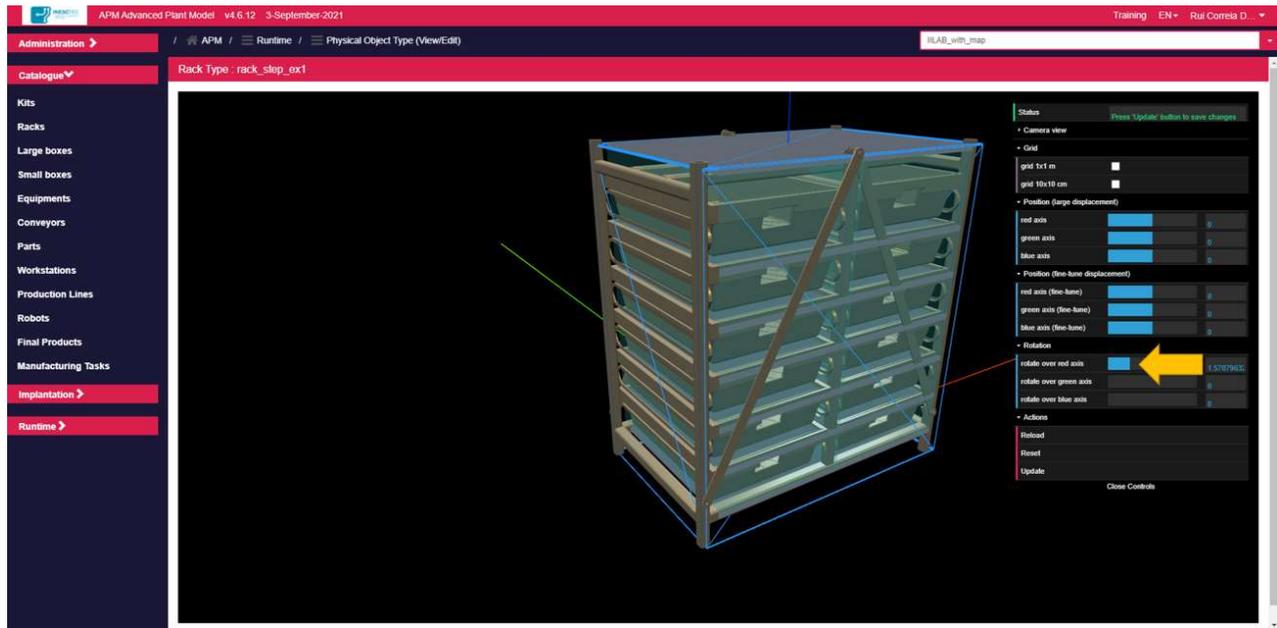
- In the list of Racks, press the  icon and check if the defined Rack has the right form. It may be necessary to align the CAD model with the respective Bounding Volume (like in the picture below).



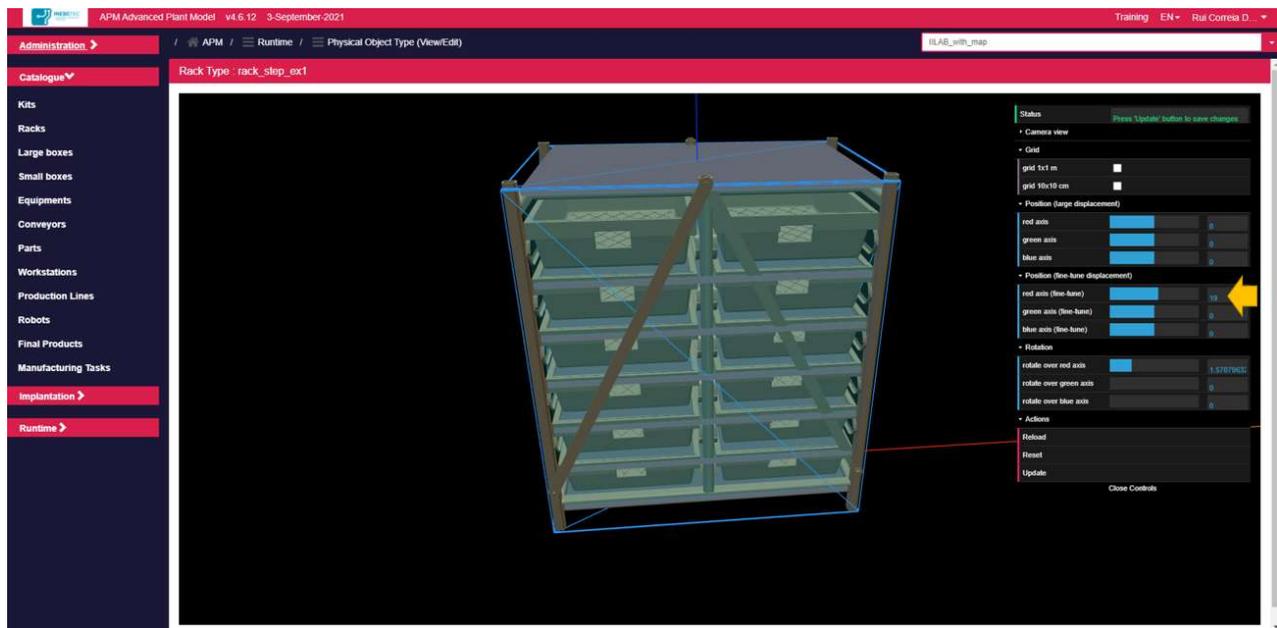
5. To align the CAD model with the respective Bounding Volume, press the top right button “**Open Controls**”. The following menu comprising four categories will expand:
- **Status**: gives feedback about the user’s actions.
 - **Position**: adjusts the CAD model position.
 - **Rotation**: adjusts the CAD model orientation.
 - **Actions**: allows to **undo**, **reset** and **update** the configuration.
 - **Undo**: loads the last saved configuration.
 - **Reset**: sets all numeric configuration values to zero.
 - **Update**: saves the current configuration.



5.1. Adjust CAD model **orientation** using the **Rotation sliders**. Each slider performs the rotation over a specific axis (red, green, or blue).



5.2. Adjust CAD model **location** using the **Position sliders**. Each slider performs a translation over a specific axis (red, green, or blue).



5.3. Once the CAD model is aligned with the Bounding Volume, press Update button to save the configuration. A message is presented “The configuration is up to date” confirming the action.

Status The configuration is up to date

▸ Camera view

▾ Grid

grid 1x1 m	<input type="checkbox"/>
grid 10x10 cm	<input type="checkbox"/>

▾ Position (large displacement)

red axis	<input type="range"/>	0
green axis	<input type="range"/>	0
blue axis	<input type="range"/>	0

▾ Position (fine-tune displacement)

red axis (fine-tune)	<input type="range"/>	19
green axis (fine-tune)	<input type="range"/>	0
blue axis (fine-tune)	<input type="range"/>	0

▾ Rotation

rotate over red axis	<input type="range"/>	1.57079631
rotate over green axis	<input type="range"/>	0
rotate over blue axis	<input type="range"/>	0

▾ Actions

Reload

Reset

Update

Close Controls

